



Our Home, our Country, and our Brother Man.

TIMOTHY SOD FOR WINTER WHEAT.

A writer in the Rural New Yorker, over the signature of P. H., of Milan, Ohio, has brought forward what is a new theory in regard to the prevention of winter killing winter wheat. His observations, of course, refer to the soil and climate of Ohio, but, peradventure, they may do for Maine. We will spread his doctrine before our readers, and they can judge of it for themselves. He says that for many years he has watched the appearance of wheat fields in the spring, and noticed, oftentimes, wide spread destruction by winter killing, or rather, spring killing. "But I occasionally observed exceptional fields, occurring rarely and at lengthened distances from each other, which were exempt from the common desolation, and where the wheat exhibited good promise of an abundant harvest. My attention was fixed by these oases in the desert, and my curiosity excited to know why and wherefore. I found on enquiry, that in every instance, the successful field of wheat had been sown on land that when the cultivation for the crop commenced was an old tough Timothy sward. Summer following in such a case had killed the sod, but it was only partially rotten, and in consequence the soil was full of vegetable fibre in a decaying condition, thereby the texture of the soil was, for the time being, changed, and the exemption from winter-killing obtained. One farmer, by whose fields I passed, appeared always to enjoy this exemption. I conversed with him—he said, 'If I can secure an old tough Timothy sward, I am almost certain of wheat.' By Timothy sward, we presume is meant what we call Hards Grass (*Poa Pratensis*). From what he further remarks, it seems that there is nothing specific in this grass to ward off the trouble, but that any very tough sward, well drained, will do it.

"In confirmation of this theory I remembered, that thirty-three years ago, when I first became a resident of Ohio, the prairie, which commences a few miles from my residence, and stretches to the west in almost interminable ranges, was new, and was then in process of being broken up. This breaking up was a serious matter, and was accomplished by a long string of oxen attached to a huge wooden plow, turning a furrow 8 inches deep, and of great width. The furrow slices, when turned over, in texture and consistence reminded one of an oaken plank, so firm and unyielding was it to the tread. It was a very tough sward, very full of hard vegetable fibre. Now, on the score of winter killing, perhaps no soil in the world is as uncertain as the prairie—or rather, I should say, none more certain to have the wheat sown upon it winter-killed; yet the early settlers raised wheat upon the tough sward I have endeavored to describe, with very uniform and invariable success. Large yields per acre were not obtained, but the yield was not capricious, but very uniform.

THE STEAM PLOUGH.

Much money has already been spent, and much more will hereafter be spent in order to bring about ploughing by steam. And after all, it is not probable that it will become a common thing. Not because of the mere cost of ploughing by steam, but because it can never be done sufficiently economical to make it both practical and profitable. In the first place, an engine of sufficient power would be both too cumbersome and too expensive, and require too much cost, for interest, fuel, and engineers, to allow it to be an economical arrangement. Unless, by the adoption of an engine, the cost of ploughing can be reduced one half compared with the present prices, it will not be profitable, everything considered, to substitute steam for oxen or horses.

The \$50,000 offered by Mr. Bronson Murray, of Illinois, to be paid as a reward for the best practical steam plough, will stimulate many ingenious men to get up something of the kind; but we doubt if it will ever obtain such an invention as is contemplated in the offer, which, undoubtedly, should be such an one as will make a complete substitute for horses and oxen, and take their place in the field.

We think differently however of a spading machine, as far as efficiency and ease of operation is concerned, if not economy. The motions required are more of an interrupted character than that of turning a furrow, and the very interruptions of motions required may reciprocally contribute to the inverting of the soil and the locomotion of the engine itself.

FARMERS' CLUBS.

These Societies are rapidly multiplying, and we venture the prophecy that, through their influence, the coming Agricultural Shows and Fairs, of the next fall, will show an astonishing degree of improvement and awakened interest among the farmers of Maine.

From the favors of our correspondents we gather the following information of interest as regards these Societies:—  
TOSHAM. The farmers and mechanics of Topham have organized a Club, the first meeting of which was held on the 28th of December last. The following were chosen officers:—  
President—Isaac E. Mallett.  
Vice President—Geo. A. Rogers.  
Secretary—Wm. A. Mallett.  
Treasurer & Librarian—Albert G. Poland.  
Committee on Subjects—Alfred S. Perkins, Leonard W. Telford, Cyrus M. Purinton.

The meetings are held weekly, and, together with the library, will be the means of diffusing much useful information among the members.

CHINA. On the 9th ult., the Stanley Hill Farmers' Club, China, was organized by the choice of the following officers:—  
President—A. C. Ward.  
Vice President—A. F. Chapman.  
Secretary—H. P. Chapman.  
Treasurer—Jos. Mc. Corison.  
Committee on Subjects—E. Williams, N. G. Ward, W. Crowell.

At the second meeting, Feb. 16, thirty-five members signed the constitution.

The subject for discussion, "Is farming profitable in Maine, and especially in this vicinity?" was freely debated. The minority contended, with many arguments, that it was not, but the majority thought it profitable, at the present time, and that, if rightly managed, it might be made much more so. The subject was continued until the next meeting.

UNION. The Union Farmers' Club was organized Jan. 25, by the choice of the following officers:—  
President—Oren O. Stewart.  
Vice President—James S. Sumner.  
Secretary—James G. Morton.  
Treasurer—Daniel Lonsford.

At the next meeting the question—"Is it better to spread green manure before or after ploughing?" was discussed. Several members cited cases where the manure had been spread and ploughed under without any perceptible benefit to the crops. The general opinion, however, seemed to be that manure on the top of the ground, or but partially buried, did but little good; that it evaporated, and dried up, and lost many of its fertilizing properties.

The President remarked that manure, in order to be of the most benefit, must be thoroughly intermixed with the soil. A stratum of manure, a foot below the surface, or in large bunches, would do but little good. It should be spread on the furrows, and thoroughly harrowed, and ploughed in; and then the roots, from the time they leave the parent seed until they arrive at maturity, can equally feel its effects. Roots will not grow well in manure without soil, nor in soil without manure; but, if the soil and manure be finely pulverized and mixed, they form the necessary food for the plant.

BETHLE. At the fifth meeting of this Club, the Secretary announced the death of Mr. Hannibal G. Chapman, of Gilead, one of the members, and suitable resolutions of respect were adopted.

The President offered some remarks, appropriate to the occasion, from which we make the following extract:—  
At the last meeting of the Club, two weeks ago, our esteemed brother Hannibal Greenwood Chapman, was present, and took a part in his exercises. To-day, we number him among the dead. He died on Friday morning, Feb. 5th, 1885, aged 31 years. The mere record of his name is not enough to leave behind him. Leaving the allurement of a life, our brother returned to the spot of his birth, to fit up and adorn for himself a home, and to extend the influences which he was capable of exerting to his neighbors around him. He introduced, at much expense, the best breeds of cattle and sheep, adapted to this climate, and constructed his buildings with all the modern improvements in his power, and was fast making his farm a delightful place of residence. Many of us well remember the pleasure he took last November, on our visit to his home, in exhibiting the results of his various labors. Our expectations were more than realized.

It is a mystery to me how he could have been so well versed in everything that pertained to the history of our domestic animals, the construction of his buildings, the preparation of the soil, and the composting of manures. But on looking at his library, I think I can see it all. He was not afraid to buy a book, and read, and profit by it. He visited and caught the spirit of improvement from all who were aiming at a higher standard of excellence in farming. He acted on the principle that what was worth purchasing at all, should be the best of its kind. From no man have I been more instructed, than from him. When engaged in our discussions something new, and to the point was sure to arrest our attention.

But when we take into consideration the fact that he was the slave of a disease which he knew must, sooner or later, exercise its utmost tyranny over him, and crush him, we may well wonder at the energy with which he prosecuted his plans. We are involuntarily reminded of that personification of human endurance, in our countryman, Dr. Kane, in accomplishing so much amid so many difficulties.

WAIFS FROM OUR COPY DRAWER.

A CHAMP ROOT CUTTER. A good machine for cutting roots, etc., is a very important thing for the farmer to have. A correspondent, who noticed our article on root cutters, in the Farmer for Dec. 3, 1887, gives us the following description of one which is cheap, as well as efficacious. He says:—This machine I have used for some ten years past, and some winters have cut upwards of 300 bushels. With it, a man can cut a bushel of roots sufficiently fine for any stock, including horses and calves; and feed them out, in three minutes' time, after he has had a little experience in its use. Its cost will not exceed fifty cents for the wood-work, and any farmer can make one in an hour. It is simply this:—Take a piece of plank (board will answer), 5 ft. long, and 16 to 20 in. wide, for the bottom, with a board one foot wide, and of same length as the plank, nailed on each side and across one end, leaving the other end open. Then, with the aid of a barn shovel ground sharp for a cutter, the machine is ready for operation.

A second-hand shovel, if the blade is whole at the cutting point, is better than a new one. Almost every farmer has one or more, of this description. In my opinion, this is the best root-cutter ever used in Maine. It is cheap, not often out of repair, takes up less room than any other, and does its work well enough, if sufficient "steam" is put on.

A PROFITABLE HOG. Last week we published a list of fat porkers, but, unfortunately, beyond their weight, we had nothing to show whether they were profitable or unprofitable to their raisers. Mr. Aaron Hoag, of So. Gardiner, sends the following account of one which he raised, and gives the figures, so that we have something tangible to cost and profit:—  
"Although the one that tells the first story is sure to be beaten, (and I see the Appleton device takes the lead of me, for weight), I will put in another entry in the case, viz: that of profit. I have just slaughtered a worthy dame of the porcine race, whom I sold, at the present low prices of pork, for thirty-nine dollars and fifty cents. I have sold fifty-three pigs from her, for two hundred and two dollars and fifty cents; and four others that I have kept, reckoned at the prices the others sold for at the time I reserved them, would amount to twenty dollars; so the whole account stands:—

For pigs sold,	\$202 50
For pigs reserved,	20 00
For pork sold,	39 50
	\$262 00
Paid for sow at 4 mos. old,	\$7 35
Cost of keeping 155 weeks,	97 50
50c per week,	\$104 85
Profits,	\$157 15

Which I think will pay quite as well as fatter ones, even if she did not weigh 700 lbs. at twenty months old.

The cost of keeping three years and nine months, I have no means of ascertaining, as I kept her with other hogs, but I do not think she left any 'outstanding bills.' I have, therefore, put it at the general estimate, as above."

LARGE CALF. A few days since, a cow belonging to Gen. E. G. Savage, of Solon, dropped a heifer calf that weighed 140 lbs., and girthed 3 ft. It was as well proportioned as four weeks old fatted calf. It is a cross of the Durham, and was sired by a bull owned by Nicholas Smith, of Bingham, which came from a Durham bull, owned in Wayne.

VENERABLE BIRDY. A correspondent says:—"Mr. W. B. Batchelder, of Wilton, has a hen that is twenty years old, and has reared nineteen broods of chickens, in as many years, having 'gathered under her wings' at least 228 of her children, until they were able to 'scratch for themselves.' From present appearances she is likely to rear as many more! Who tells a greater hen story, that is a true one?"

Nobody, we venture to reply.

NEW PROPERTY OF CAMOMILE.

Everybody has heard of camomile, it having been in use both as a domestic and professional medicine so long, that the memory of man runneth not to the contrary. But all of its virtues were not discovered, at any rate a new one has been found out, and is promulgated in the London Times as follows:—  
"Camomile (*anthem. nobilis*) is described in all treatises of materia medica as emollient, digestive, fortifying, &c., but none point out a most precious virtue just announced as pertaining to it by Mr. M. Ozanam, whose paper on the subject was presented to the Academy of Sciences at its last sitting, by M. Clocquet.

The virtue consists in preventing supuration when the local disease is not too far advanced, and in gradually stopping it when it has existed for a long time. For this purpose it is administered in large doses, of five, ten, and even thirty grammes, (a gramme is nearly the 24th part of an ounce troy, or 20 grains) of the flowers, in a litre, (a little over one wine quart), the infusion to be drunk in the course of the day, and to be continued until the cure be effected.

Compresses moistened with the infusion may be locally applied, they aid in the cure but are not necessary—the infusion alone, taken internally, being quite sufficient.

TROUBLE AMONG THE REAPERS.

We have received a pamphlet copy of a "Protest against the report and awards on the field trial of Reapers and Mowers, and harvest implements, by the United States Agricultural Society at Syracuse, July, 1887."

REPORT OF THE BOARD OF AGRICULTURE.

Mr. Editor:—Having most agreeably enjoyed a perusal of the second Report of the Secretary of the Board of Agriculture, I have a very strong desire that my brother farmers of Maine should have the opportunity furnished to each of them, of experiencing the gratification and instruction which I have had. And, as it lies with ourselves whether we do, or do not, have this new and valuable book upon agriculture,—upon the agriculture of our own State—nicely adapted to our wants, and full of suggestions for the remedy of evils existing in our very practice, and for progress in our art here at home,—I feel it to be my duty, as one of the many who would be alike benefited by it, to declare my convictions through the Farmer—our State agricultural trumpet, the notes of which should, if they do not already, reach the brains of every farmer in the State, even though occasionally some weak little sniper, should surreptitiously get hold of it and make discordant din like this. My strain may not be musical,—that requires practice, which I have not; but for duty's sake, I shall attempt one blast. As does a certain animal of burden—to whom perhaps I may, and ought to be, likened, for presuming to sound this note of praise, and for intruding my thoughts,—I, as a farmer, know the food good for me to partake of when it is placed before me, and when it is particularly excellent, I too, right loudly, like to buy. Possibly, I may win the praise jacksack did from Paddy—"This a powerful rich voice yez have for music, darlint, but it lacks cultivation amazingly!"

Now, my brother farmers, I know,—and when a man says he knows, it is never worth your while to dispute him,—I know, for I have read it through, that this is a grand book for all of us, old and young. It is adjusted to the agricultural condition of Maine, as she now exists, and to the present trials of her soil; a book, by the reading of which we get new ideas pushed and fastened into our brains. Take it up any day of the year, and there may be found a hint to act upon at once, with benefit. It is, throughout, thoroughly practical. Its author can be no mere closet man. He has manifested his direct study of nature's page as spread before him by the hand of God; and it is equally evident that he has carefully read man's comments thereon. He constantly exhibits what so many writers lack, particularly those who assume to teach the farmer,—good common sense. And he must possess a comprehension broad as the land he has traveled over in preparation of his mind for his work.

Here he tells us of a journey East, almost to the jumping off place; and, through a report of our State Society's President to his own country, we hear of him among the mountains and sand-hills of the West. In reading this book, a man imbibes, not the diluted homoeopathic dose of one part of sense to ten thousand parts of nonsense, but first proof spirit in every part; and it is bound to do him good in ever so strictly temperance terms. Sick or well, it must help him who opens his mind to admit it. It is not the egotistical drivelling of a namby-pamby, self-instituted professor of our art, but it is a genuine and substantial common-sense view of agriculture as it is here, now, and the carefully matured suggestions of an able and discreet mind for our improvement.

SHEEP POISONED BY LOW LAUREL.

In the winter and spring months when sheep can get at the low evergreen bush called "lamb-kill" or low laurel (*Kalmia angustifolia*), they will eat it, and it poisons them. The symptoms are a dull, stupid appearance—will not eat, and are constantly throwing up a greenish colored liquor, and if they obtain no relief they swell up and die. This green liquor they as constantly swallow down again. If they can be made to throw it off clear they often recover without any other remedy. To effect this put a gag in their mouths to keep it open, so that the fluid will run out when it is thrown up. A large oar or a stick put into their mouths, with a string tied to one end, passed over the head and tied to the other end, will effect this purpose.

The following remedy we clip from the Home-stead:—  
Procure a quantity of white-ash buds; steep until the strength is out; turn a tea-cupful of the liquor down each sheep, and I will guarantee that your sheep will be on its legs within six hours.

MORE ASIATIC GOATS.

A short time ago, Mr. Howard, the Editor of the Boston Cultivator, stated that he had examined some fine specimens of the Angora or Cashmere Goats, that had arrived in a vessel from the Mediterranean, at the port of Boston, but did not know from whom they were imported. By the last number of the Ohio Cultivator, we learn that they are the property of Jos. P. Brown, Esq., of Bainbridge, Ross County, Ohio, who procured them through the agency of Hon. John P. Brown, late of Ross County, Consul General of the United States at Constantinople.

This importation, which consists of 3 males and 9 females, all arrived in good condition. The Editor of the Cultivator says the specimens of wool from them are the finest and softest of any he has seen.

We are happy to hear that this importation has arrived at its place of destination in prime condition. In a few years eastern shawls will be manufactured in the United States, from wool the growth from our own soil. We wish success to the enterprise.

VOCAL MACHINERY OF BIRDS.

Of Nature," speaking of this subject, says:—"A recent discovery has shown that in birds the lungs have several openings communicating with corresponding air bags or cells, which fill the whole cavity of the body from the neck downward, and into which the air passes and repasses in the process of breathing. This is not all. The very bones are hollow, from which air pipes are conveyed to the most solid parts of the body, even into the quills and feathers. The air being rarified by the heat of their body, adds to their liveliness. By forcing the air out of the body, they can dart down from the greatest heights with astonishing velocity. No doubt the same machinery forms the basis of their vocal powers."

THE OLD FARMER'S COMPLAINT.

They tell me I'm behind the times, and, may be, it is so; I'm sure I can't keep up with them, so very fast they go; I hear of lightning telegraphs, of railroads and of steam, and of gold that's found so plenty that it seemeth like a dream; But all these things are wonderful is often said and sung, But I doubt if folks are happier now than they were when I was young.

My sturdy sons, in days of yore, arose with morning light, And the echoing woods with crashing roar gave token of their night; The "logging camp" and "sugar camp" were pleasant then to see, They heeded not the cold or damp with hearts so bold and free; But times are changed, our young men now goes off to keep a store, Nor walks the way his father did in good old days of yore.

We've moved into our parlor now, and try to live genteel; I must not shew my ax-helves—my wife's put by her wheel; And on our centre-table we have nick-nacks half a score, Some made of pea green paper, with wafers pasted over; My daughters use those curious arts to much the fashion now— Crochet and Grecian paintings—but they rarely milk a cow.

Alas! Jane cuts paper flowers—Juliana plays and sings, And they are both bedecked and furbelowed with streamers and with strings, And they ask "if Dickens' last is out?"—I think the Dickens is The latest of the present day who neither card or spin, nor work with worsted for slippers, they pass away their hours of leisure.

And mark the tone with "Love" or "Hope," or doubtful sighs of flowers; Ah, it was not thus their grandmothers did, in good old days of yore. When the good fiddler of our good folk made all the clothes we wore. In those old days the farmer's hearth a blazing fire did glow, And the circle that surrounded it shewed many a happy face.

Then the apples, and the nuts, and the sparkling cider can, Went round with mirth and harmless jokes, and cheered the inner man. That circle gay is seen no more; 'tis scattered far and wide, For some have sought a distant shore, and some at home have died; Then my anecdotes to our Christmas folks would set them in a roar, I feel sure I freely use about my story and my log house.

Now "Grandpa with his ancient jokes" is voted "quite a bore." The temperance men have cut our trees; we've now no cider cup; By air tight stoves we burn or freeze while chimneys are bricked up; The "cheer folks all, all are dead," we'll see them here no more.

HINTS FOR THE SEASON.

Attend to your stock. See that they are properly fed and cared for. As some of your cows will soon calve, have them, and their young, under good shelter, and let the mothers be fed with care.

Ewes will lamb about this time: feed them well, and the lambs will have plenty of nourishment. If any disease should appear in the flock, attend to it promptly.

Where you intend to plow early, manure may be carted upon the land. Do not spread it, however, but leave it in large heaps. Let the spreading be done just previous to ploughing.

See that your fences are in good repair: it is bad policy to have to work at them when you ought to be ploughing or sowing. Have all kinds of seeds ready: it will save time at some subsequent period.

BOARD OF AGRICULTURE.

EVENING CHAT.

MONDAY, JAN. 25.

Subject for discussion, "The best methods of making and spreading manure, and their application." Mr. Perley, of Cumberland, said, the operation of the plough was well understood, but it is not so in regard to the spreading of manure, and he did not like to speak of personal matters, but as I can best make myself understood in this way, I shall speak of personal experience. I have a much better idea of the quantity of manure, and of the best quality, but better than nothing. I constantly keep on hand a good supply of manure that has been dug out and exposed to be acted on by the country's sun, rain, and the frost. It should not be piled up too much, but spread about as to be the most exposed to these agencies. I regard it as in the best condition for use in the stable and the compost heap, when it is dry. By suitably composting stable manure with muck, there is a great saving of material elements. Two loads of muck to one of stable manure, especially of horse manure, I regard as worth more than three loads of manure alone. The best for use on the farm is the mixture of muck and manure. Manures should always be housed, to prevent waste. Such manure is worth at least one-third more than manure exposed to the action of the sun and rain.

My method of applying manure is to spread it on green, and plough it in deep. I am not sure that this is the best method, but I have ploughed the manure in with a shallow furrow. I have tried guano in several ways, but the best method, according to my experience, is to compost it with muck, and apply about three hundred pounds to the acre. I have also tried superphosphate of lime, mostly in the hill of corn. It gave the crop a good start; but did not hold out to the end. The corn seemed to lack something. I have also applied guano to worn out land; but I could not see any benefit from it.

Dr. True, of Oxford, said, he wished to inquire if any one in the interior of the State, had tried duck mud or marine mud. I have tried one experiment with a small quantity of this mud, with good results, so far as I could judge. The experiment was not conducted with that accuracy and care necessary to elicit that degree of reliable information needed; but I think where it was applied to grass, the crop was nearly doubled, particularly the white clover.

Guano and superphosphate of lime have been tried in my neighborhood to a very limited extent; but I believe with not very extraordinary results. The composting of manure is a very important matter. If not well and properly done, great loss will be suffered. The best compost for corn that I have ever used, was one made of muck, lime, salt, and plaster, well mixed together and allowed to lay one year undisturbed.

John Seth Scammon was called on, and said, in farming I feel that I am but a mere pigmy, though brought up by the business. I regard the manure heap as the farmer's bank, and the larger its deposits, the better. In my own experience, I find for my advantage to cart manure from the fields into my fields. I keep a cart running to the neighboring village a portion of the year, and the night-sold that obtained I compost with muck. The muck, my premises, is of rather a tenuous character, and when exposed without any admixture of other substances, is liable to bake. Still I find it a very good manure and not at all expensive.

I had another method of increasing my manure. I collect saw dust, and, and every species of vegetable substance which I freely use about my story and my log house. This prevents horse manure, especially, from heating so, as it is disposed to do, rapidly, and absorbs the gases, and not only adds largely to the quantity but improves the quality of my manure.

My method of applying manure is this: In the spring I haul out my manure and spread it on the surface, and then plough it under, as deep as I can. For hood crops, I prepare a fine compost which I put in the hill, and on it I plant my corn and other crops.

In reply to an inquiry, he said, I have tried the ammoniacal liquor of the gas-works, but not in a way that can be regarded as an experiment. I prepared a cart and in my absence from home, sent my man to get a load of this and put it in a heap of muck. He did so, but, not properly airing for its reception, it broke down, and ran down the side of the elevation where it was deposited. This was in January last. The effect of it was, to secure a marked increase in the quantity of grass, which was of a very deep green color and of a most luxuriant growth.

Mr. Fortin, of Oxford, said, I have purchased considerable quantities of manure, and have found it to be a most valuable manure. When I first went on this, I brought all I could. I was obliged to do so, to bring up my farm, which was run out with excessive carting. These manures were composed in a great degree of straw decomposed, which in the process of decomposition, would shrink full two-thirds. My experience, however, is, that I cannot afford to purchase such manures and haul them from one village, at the price asked for them. My judgment is, that every farmer must depend, mainly, for his manure, on the resources of his farm, if he means to make farming in the highest degree remunerative.

My methods for increasing the quantity and improving the quality of my manure, is to supply my horse yards with muck, and deposit there waste and every green thing that can be applied to no other purpose. I also get the shavings, drench of the line pit and the spent tan bark from the tannery, and compost all with stable manure. I spread the tan bark over my yard and bed my cattle with it. I do not regard it as good as muck; but it is better than nothing. It will decompose in about two years, when well saturated with the liquid of the stable and barn-yard, and become reduced to a fine powder.

The usual method of ploughing to maintain the productiveness of gran lands. Kewen has been highly recommended as a feed for cows and calves. I fully coincide with that opinion. I once took special pains to secure a good supply of it, which I did by cutting grass early, before it headed. In this way I got two or three good crops of this fodder in a year, from the same land.

MAPLE SUGAR MAKING.

For the benefit of amateur sugar-makers, we condense the following from an article in the New York Tribune. The price of maple sugar, in correspondence with other things, will be no lower in the spring of 1885, than 1887, and is always in demand as an article of luxury, and considered wholesome.

The best not to tap the trees with an axe—iron upon land which you intend to clear, as it may pass into other hands before you are ready to clear it, and a successor might prefer to keep the trees. The best way to tap trees, is to bore them on the sunny side, two feet or more above the earth, with an auger not over one inch in diameter, and at first, not over half or three-fourths of an inch into the wood, and to slant upward. Boring with slant downward, holds water, and produces decay. This aperture may be increased, after the surface becomes dry, and the flow of sap is checked. To conduct the sap into buckets, use iron spouts, which will cost you the price of thin iron and a quarter wide hoop-iron, cut into lengths of two to four inches, by your own hands, with a small cold cutting chisel, using the end of a hard wood block for an anvil. These are made quicker than wooden spouts, and will last for several years, if properly stored away after using.

Drive the spouts into the bark only, and never stick the buckets under them, but hang them on a nail, by the bail, or a piece of twisted wire. When the sap is boiled to the right point, which experience teaches, strain it through flannel, or coarse cloth, into a tub, and let it cool. To it, put a quart of milk, or still better, a pint of milk and two or three eggs, to ten gallons, and beat slowly, and strain carefully. The eggs should be well beaten with the milk, and thoroughly stirred into the sirup, before it is heated. Great care is necessary to prevent scorching after the sirup begins to grow waxy, from which time until it is sufficiently boiled the fire must be very gentle and under control.

Waxy sirup will make drained sugar, leaving a considerable residue of molasses to be reboiled or kept for use. Brittle, waxy sirup, is required to make cake sugar. For dry grained sugar, the sirup must be concentrated before straining, until when dropped upon snow and suddenly cooled, it is nearly as brittle as resin.

To make white sugar, the sirup when strained must be passed through animal charcoal several feet thick. Charcoal, when made of wood, absorbs and wastes the sirup.

The stated yield per tree, in good seasons is from 25 to 34 pounds. The best form to prepare the sugar in, for market, is in cakes, tons of which are sold in the streets and shops of the cities, to be eaten like candy, at 30 to 50 cents a pound, and the sirup will "out sell" its atany time, the very best "golden sirup" that the market can afford.

(Ohio Farmer.)

THE IRON ORES OF WISCONSIN, AND THE COAL FIELDS OF ILLINOIS. A recent report of Prof. Daniels, State Geologist of Wisconsin, gives some interesting facts relative to the iron deposits of that State. These deposits are found, first, in beds or veins in the rocks where they were originally formed or introduced; second, deposited from aqueous solutions in low ground, as bog ore or ochre. The deposits of bog ore are very numerous in the swamps and marshes of the State, but none have been discovered of sufficient value to be profitably worked. Of the rock deposits, the most important is that at Black River falls, in Jackson county. About two miles above the village the bed is 18 feet thick.

The ore lies in bands of massive hematite from six to forty feet in width. Near this is also a heavy deposit of black oxide, highly magnetic. Small veins of specular ore are also seen. It is estimated that on one side of the river are 15,000,000 tons of available iron, and the other 29,000,000 tons. At Iron Ridge, in Dodge county, is another extensive deposit. The company working it are estimated to have 13,612,500 tons available iron at their command. Another large bed of ore is located in the towns of Hartford and Depere, in Washington county. The ore is seven feet thick, and near the surface. In the town of Marston, Stark county, is a bed of brown hematite, from ten to twenty feet in thickness.

Prof. Daniels also gives the result of an examination of the coal fields of Northern Illinois, made for the purpose of ascertaining their availability in working the iron mines of Wisconsin. He says that the coal district at La Salle, on the Illinois river, is from twelve to eighteen miles in diameter, and contains not less than 150,000,000 tons of coal. The deposit consists of three seams, one seven feet, one five feet, and one three to four feet thick. The material resources of the north-west are indeed astonishing.

THE LATEST INVENTION. A mill has been started in Haverhill for the preparation of "granular fuel." The "masheen" will cut into four inch lengths all sorts of brush, such as huckleberry bushes and similar shrubs up to large alder branches. The fuel will light without shavings, and will burn longer than charcoal, and answer the same purpose, and it is considerably cheaper. The inventor thinks it a good thing, and says it will give the farmers in that vicinity a chance to rid themselves of huckleberry pastures, which are to many a constant source of complaint and annoyance.

A COSTLY FENCE. The Illinois Central Railroad Company is constructing a snow fence from Galena to La Salle. The portion of the road from Danforth to the former point does not require that protection, owing to the nature of the surface. The fence has been set for seventy-eight miles, on an average about ten boards high, and will cost when completed, in the coming summer, about \$130,000. The posts are of oak and the boards are put on with regard to permanence. It is believed that the fence will stand for forty years.











